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PART IV

DEPARTMENT OF THE INTERIOR

Mining Enforcement and Safety Administration

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ROLL-OVER PROTECTIVE STRUCTURES (ROPS) AND SEAT BELTS FOR SELF-PROPELLED EQUIPMENT

Title 30—Mineral Resources

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Roll-Over Protective Structures (ROPS) and Seat Belts for Self-Propelled Equipment; Decision of the Secretary

In accordance with the provisions of section 6 of the Federal Metal and Nonmetallic Mine Safety Act (30 U.S.C. 725 (1970)) there was published in Part IV of the FEDERAL REGISTER for October 24, 1974 (39 FR 37958–37961), a notice of proposed rulemaking which set forth proposals to amend Parts 55, 56, and 57, Subchapter N, Chapter I, Title 30, Code of Federal Regulations by renumbering and revising advisory standards 30 CFR 55.14–12, 56.14–12, and 57.14–12 and making these advisory standards mandatory and applicable to surface only. The proposed standards provide engineering or performance criteria for the design, construction, and installation of roll-over protective structures (ROPS) and seat belts on certain specified self-propelled equipment excluding equipment that is operated by remote control. The Federal Metal and Nonmetal Mine Safety Advisory Committee, authorized to be established under section 7 of the Act (30 U.S.C. 726 (1970)) and established in accordance with section 9 of the Federal Advisory Committee Act (5 U.S.C., Appendix I (Supp. III 1973)), was in favor of revising the existing advisory standards and making their requirements mandatory. However, the Advisory Committee did not recommend the specific language of the proposed standards.

Therefore, under section 6(c) of the Act (30 U.S.C. 725(c)), the proposed revisions to the existing advisory standards are proposals which the Secretary of the Interior proposed to promulgate and to designate as mandatory standards. Under section 6(d)(1) of the Act (30 U.S.C. 725(d)(1)), any person who may be adversely affected by the proposed mandatory standards which had been designated as "Mandatory" standards by the Secretary and which had not been recommended as "Mandatory" standards by the Advisory Committee could file written objections and request a public hearing subject to the Administrative Procedure Act (5 U.S.C. 556 and 557) on such objections. Interested persons were afforded a period of 45 days following publication of the notice of proposed rulemaking within which to submit written data, views, arguments, and objections including requests for public hearing. Requests for a public hearing must be in writing and state the grounds for such objections.

Following the publication of the notice of proposed rulemaking in the FEDERAL REGISTER interested persons submitted their written views, arguments, and objections with respect to proposed mandatory standards 55.9–87, 56.9–87, and 57.9–87. Since standard numbers 55.9–87, 56.9–87, and 57.9–87 were assigned to mandatory standards requiring audible warning devices on heavy duty mobile equipment and were promulgated in Part IV of the FEDERAL REGISTER for June 10, 1976 (41 F.R. 23612, at 23613, 23615, and 23617, respectively) proposed mandatory standards 55.9–87, 56.9–87, 57.9–87 will be renumbered 55.9–88, 56.9–88, and 57.9–88. A public hearing was requested by the American Mining Congress, the National Crushed Stone Association, the National Sand and Gravel Association, and the State Contracting and Stone Company. A notice of public hearing was published in the FEDERAL REGISTER (40 FR 19498–19500) on May 5, 1975. The notice set forth the objections which had been filed and upon which a public hearing had been requested and gave notice that a public hearing commencing on Wednesday, June 4, 1975, at 9 a.m., c.d.t., in Dallas, Texas would be conducted by an Administrative Law Judge, Office of Hearings and Appeals, Department of the Interior, who would receive evidence relevant and material to the issues raised by the objections which had been filed. The notice further provided that the Administrative Law Judge presiding over the public hearing had all the powers necessary and appropriate to conduct a fair, full, and impartial hearing including the powers provided in 5 U.S.C. 556(c)(1) through (7). The notice further provided that the Administrative Law Judge would consider all objections and based upon the record submit a recommended decision to the Secretary of the Interior who would review the recommended decision and issue the final decision.

Among those organizations which were represented and actively participated in the public hearing were the American Mining Congress, the National Crushed Stone Association, the State Contracting and Stone Company, the Diamond Crystal Salt Company, the Construction Industries Manufacturers Association, the American Welding Society, the International Union of Operating Engineers, and the United Steel Workers of America. Upon conclusion of the hearing interested persons were given until August 10, 1975, to file statements of facts and arguments in support of their respective positions. The Honorable Charles C. Moore, Jr., Administrative Law Judge submitted a "Recommended Decision" dated November 18, 1975, to the Secretary of the Interior on April 16, 1976. Interested persons may examine or obtain copies of the "Recommended Decision" of the Administrative Law Judge from the Chief, Safety Division, Metal and Nonmetal Mine Health and Safety, Mining Enforcement and Safety Administration, Room 717, Ballston Tower No. 3, 4015 Wilson Boulevard, Arlington, Va., 22203, telephone number (area code 703) 235–8647.

Based upon the findings of fact and conclusions of the Secretary of the Interior the wording of paragraphs (a) through (h) recommended by the Administrative Law Judge is adopted and ratified as the final wording of mandatory standards 55.9–88, 56.9–88, and 57.9–88, with the exception of two editorial changes in paragraph (h). The references to Military Standard MIL-STD 248c and the American Welding Society Structural Welding Code AWS D1–1–73 are deleted because they are no longer applicable in view of the decision to allow either the roll-over protective structure (ROPS) manufacturer or a registered professional engineer to decide what qualifications welders must have to make alterations and repairs to ROPS and ROPS-to-vehicle frame mounts provided in paragraph (f).

The recommendation of the Administrative Law Judge to add a new paragraph (i) to the proposed standards that purports to establish criteria for restricting the scope of the standards by providing conditional exemptions for self-propelled equipment when such equipment is used near the edges of high benches or cliffs or near deep water is rejected because such exemptions seriously weaken the general provisions of the standards, contain vague undefined terms and complicated procedures, and are unnecessary since the operator may be entitled to a variance from those standards pursuant to 30 CFR 55.24, 56.24, and 57.24 in specific circumstances where the health and safety of all persons which the standards are designed to protect will be no less assured under the variance permitted. It is also recognized the ROPS standards promulgated under the Federal Coal Mine Health and Safety Act of 1969 (30 U.S.C. 801–960 (1970)) and the Occupational Health and Safety Act of 1970 (29 U.S.C. 651–678 (1970)) do not contain provisions similar to recommended paragraph (i).

Notice is given that based upon the substantial evidence of record made at the public hearing, post hearing statements of facts and arguments, and after careful review of the "Recommended Decision," the final decision of the Secretary of the Interior is set forth below.

Dated: January 19, 1977.

THOMAS S. KLEPPE,
Secretary of the Interior.

FINAL DECISION

On October 24, 1974, there was published in Part IV of the FEDERAL REGISTER[1] a notice of proposed rule making setting forth proposals to renumber and revise advisory standards 30 CFR 55.14–12, 56.14–12, and 57.14–12 and to make these safety standards mandatory. The proposed mandatory standards provide engineering or performance criteria for the design, construction, and installation of roll-over protective structures (ROPS) and seat belts. The notice of proposed rule making provided that on or before December 9, 1974, any interested

[1] 39 F.R. 37958–37961, Government Exhibit No. 1.

person who might be adversely affected by the proposed mandatory standards could file with Secretary of the Interior, through the Administrator, Mining Enforcement and Safety Administration, written objections stating the grounds for such objection and request a public hearing on such objections, subject to the Administrative Procedure Act, 5 U.S.C. 556 and 557.

Following publication of the notice of proposed rulemaking in the FEDERAL REGISTER, interested persons submitted their views, arguments and objections with respect to proposed mandatory standards 55.9–87, 56.9–87, and 57.9–87.[2] A public hearing was requested by the American Mining Congress, the National Crushed Stone Association, the National Sand and Gravel Association, and the State Contracting and Stone Company. A notice of public hearing was published in the FEDERAL REGISTER on May 5, 1975, (40 FR 19498). This notice set forth objections and grounds stated for such objections to the proposed mandatory standards; stated that interested persons could examine or obtain copies of all comments, suggestions, and objections which were filed; and, stated that at the hearing any interested person would be heard.

The public hearing was held on June 4 and 5, 1975, in the Texas Room, Baker Hotel, Commerce and Akard Streets, Dallas, Texas.

PROCEDURE FOR DEVELOPMENT OF HEALTH AND SAFETY STANDARDS UNDER THE FEDERAL METAL AND NONMETALLIC

The Federal Metal and Nonmetallic Mine Safety Act, Pub. L. 89–577 as amended by Pub. L. 94–41, embodies a policy of granting to the Secretary of the Interior a broad congressional mandate to develop and revise appropriate standards rather than spelling out in detail within the Act the standards to be established. Section 6 of the Act[3] sets forth specific procedures for promulgating health and safety standards and provides for administrative hearings and judicial review of the Secretary's decision on objections raised to standards which have not been recommended by the Federal Metal and Nonmetal Mine Safety Advisory Committee appointed pursuant to section 7 of the Act.[4]

Section 6(a) of the Act directs the Secretary to develop health and safety standards for the purpose of protecting life, promoting health and safety, and preventing accidents in mines and mills subject to the Act. In developing and revising such standards, the Secretary is required to consult with the Advisory Committee although he is not bound to accept the Committee's recommendations. Under this procedure the principal interested parties—workers, management, state officials charged with mine health and safety, and qualified persons representing the broad public interest—are guaranteed a continuing opportunity to make their views and recommendations directly known to the Secretary.

After publication of proposed mandatory standards in the FEDERAL REGISTER, interested persons have a statutory period of not less than 30 days, in which to submit written data, views, or arguments. Upon the expiration of this period of time the Secretary may promulgate the standards, except—if mandatory standards are proposed which have not been recommended by the Advisory Committee, then, any person who may be adversely affected by any such standards may file with the Secretary written objections and demand a public hearing on the objections. Under section 6(d)(2) public hearings are subject to sections 556 and 557 of the Administrative Procedure Act.

After due notice, the Secretary holds a public hearing for the purpose of receiving evidence relevant and material to the issues raised by the objections. The described procedure has been followed in the instant case since the proposed mandatory standards were not recommended by the Advisory Committee.

PRELIMINARY MATTERS RAISED AT THE OUTSET OF THE HEARING

Opponents of the proposed mandatory standards objected to the fact that on the night before the scheduled hearing, the Mining Enforcement and Safety Administration made available to all parties that could be located, suggested revised proposed mandatory standards which were, in part, different from those published in the FEDERAL REGISTER. The opponents of the mandatory standards also objected to the fact that proper procedures had not been followed in the initial stages of this formal rulemaking proceeding.

As to MESA's action in making its suggested revised proposed mandatory standards public immediately before the hearing, I can sympathize with the position of the opponents. They came to the hearing prepared to oppose certain portions of the published proposed mandatory standards only to find that certain portions had been changed and that their prepared objections may no longer be valid. I cannot agree, however, that MESA's action in this regard renders the proceedings unlawful.

There is no doubt that the original proposed mandatory standards and the written objections, grounds stated, and requests for public hearing described the subject matter and the issues involved in the hearing, and the fact that MESA, after analyzing comments from the industry, modified these proposals to accommodate some of the adverse comments of opponents cannot be said to be prejudicial to the rights of those opponents. Regarding this aspect of the case, therefore, the opponents' objections are not well taken.

As to the opponents' objections concerning the procedures followed in this case, it was pointed out during the hearing that the Department of the Interior does not have published procedures for the promulgation of mandatory standards under the Federal Metal and Nonmetallic Mine Safety Act. The only published rules concerning that Act appear at 43 CFR 4.650 et seq. and those rules involve procedures for appealing adverse actions taken by an inspector. They are not concerned with promulgation of mandatory safety standards. In a previous formal rulemaking proceeding under this Act, the Secretary of the Interior has promulgated mandatory safety standards after a public hearing, such as the one involved here, and has thus, by implication at least, decided that published procedural rules are not necessary. Furthermore, the notice of public hearing published in the FEDERAL REGISTER (40 FR 19500) expressly provided that the Administrative Law Judge presiding at the public hearing shall have all powers necessary and appropriate to conduct a fair, full, and impartial hearing including the powers provided in 5 U.S.C. 556 (c) (1) through (7). Therefore, any objections as to the lack of published procedures for the promulgation of mandatory standards are overruled, as are the suggestions that the Department of the Interior should have followed the procedures promulgated by some other agency involved in formal rulemaking.

BACKGOUND OF THE PROPOSED RULE

The need to strengthen the requirements for roll-over protective structures (ROPS) on self-propelled equipment used in metal and nonmetal open pit mines; sand, gravel, and crushed stone operations; and on the surface of underground mines, is based on the injuries and fatalities occurring at such mines. The fact that self-propelled equipment does roll over regardless of the terrain has been recognized for many years by the U.S. Army Corps of Engineers, the State of California, and the Occupational Safety and Health Administration. The need to provide protection from accidental upsets for the operator of self-propelled front-end loaders, dozers, tractors, including industrial and agricultural tractors, motor graders, and prime movers, all used with and without attachments, has prompted the Society of Automotive Engineers, Inc., to develop performance criteria for ROPS (Tr. 35).

The Secretary of the Interior has already found that eqiupment roll overs are a prime cause of injuries and fatalities in surface coal mines and surface work areas of underground coal mines, and that fatalities and serious injuries to operators of mobile equipment would be significantly reduced by the proper design, construction, and installation of ROPS. Based in part on these findings, the Secretary promulgated 30 CFR 77.-403a as the roll-over protective structure (ROPS) standard for surface coal mines and surface work areas of underground coal mines (39 FR 24006–24008) (Tr. 36).

According to the testimony, between 1971 and the date of the hearings, representatives of the Mining Enforcement and Safety Administration contacted and personally visited the Department of Labor, Corps of Engineers, State of California, and the Bureau of Reclama-

[2] Government Exhibit No. 3.
[3] 30 U.S.C. 725 (a)–(e).
[4] 30 U.S.C. 726.

tion (Tr. 322). MESA reviewed the standards OSHA planned to publish and attended the Department of Labor's public hearing on the Secretary of Labor's proposed ROPS standard. In addition, a member of MESA's Technical Support Group, together with a representative of OSHA, participated in the Society of Automotive Engineers (SAE) Subcommittee 12 (Tr. 323), which is a subcommittee of the Construction and Indusetrial Machinery Technical Committee. The title of Subcommittee 12 is "Vehicle Test Codes," and ROPS is one of the codes developed by this subcommittee.

It was stated, without contradiction, that since 1971 MESA and OSHA personnel have met on six or more occasions to exchange information and coordinate their ROPS activities.

CONTENTIONS OF THE PARTIES

No one at the hearing seriously opposed the concept of mandatory standards requiring the installation of roll-over protective structures (ROPS) and seat belts on certain mining equipment. The disputes arose as to whether or not MESA had in fact made sufficient background investigation to justify various aspects of the standards, whether certain parts of the standards should be amended or deleted, whether the wearing of seat belts should be mandatory even though the Secretary's proposal does not include mandatory wearing of seat belts, and whether certain types of equipment or equipment used in certain types of operations should be exempted from these Standards.

More specifically, the objections to the proposed rules involved contentions: (1) That the standards should not apply to equipment used primarily underground; (2) that the standard should not require that field welding be done by "certified" welders; (3) that the definition of "prime mover" should be clarified; (4) that the wearing of seat belts should be mandatory; (5) that for currently existing equipment with roll-over protective structures (ROPS) which do not contain the fabricator's name, model number, etc., that evidence of approved certification should be considered sufficient; (6) that roll-over protective structures should not be required to be added to equipment which already, pursuant to other standards, contains falling object protective structures; (7) that for purposes of the standards, a piece of equipment should be considered as fitted with proper roll-over protective structures (ROPS) if a bona fide order for such structures has been placed but not yet delivered and installed; (8) that the incorporation by reference of various scientifically established standards which are exhibits in the case, causes confusion; (9) that equipment used on highwalls should be exempted; (10) that an authorized representative of the Secretary should not be given authority to require that roll-over protective structures (ROPS) be installed prior to the dates set forth in the standards themselves; (11) that equipment used primarily near deep water should be exempted from the standards; and (12) that the standards should not contain a provision requiring the approval of the manufacturer of the roll-over protective structure (ROPS) before any repair can be made to that structure.

RESOLUTION OF ISSUES

Nearly all of the testimony presented at the hearing in Dallas was either hearsay or opinion evidence. Nevertheless, I consider such evidence sufficiently reliable to convince me of the necessity of a mandatory standard requiring roll-over protective structures (ROPS).

SEAT BELTS

After examining all of the evidence presented I am led to the conclusion that roll-over protective structures (ROPS) will not be a significant factor in saving lives when a rollover occurs unless seat belts are worn. However, there is a controversy between opponents to the proposed mandatory standards concerning the mandatory use of seat belts. The American Mining Congress and the National Crushed Stone Association advocate that the proposed standards should be modified to require the compulsory use of seat belts and the National Sand and Gravel Association and the State Contracting and Stone Company argue in opposition to such revision. Mr. Jerry Martin testified that almost 100 percent of the Operating Engineers will use seat belts if provided, Tr. 246). On the other hand there was testimony from witnesses who proposed the wearing of seat belts as added protection in an equipment roll-over that seat belts would not be worn when sheer drops or deep water is encountered. The use of seat belts is covered under advisory standards 30 CFR §§ 55.-15-13, 56.15-13, and 57.15-13 (Tr. 91.133), which provide in substance that where ROPS are provided seat belts should be used. Under both the existing advisory standards and the proposed mandatory standards, mine operators will have the option of requiring the use of seat belts when ROPS and seat belts are installed. Of course, unless seat belts are required to be installed on self-propelled equipment, there would be no option available. This flexibility will also provide an equipment operator with the opportunity to release his seat belt when his equipment is operating in those limited areas where the equipment is in immediate danger of falling over sheer drops or directly into dangerous bodies of water. The question of mandatory use of seat belts has not been submitted to, nor have the pros and cons of such a standard been considered or discussed by the Advisory Committee. The Secretary, therefore, has not had the benefit of the views of that Committee, nor have the procedural requirements of the Act been fulfilled with respect to such a standard inasmuch as it was not within the scope of the proposed mandatory standards under consideration. Consideration will be given to submission of the issue to the Advisory Committee for its consideration and recommendation on whether the use of seat belts should be mandatory and exceptions, if any, which should be provided. There will, therefore, be no requirement of the wearing of seat belts in the mandatory standards adopted in this decision.

DEFINITION OF PRIME MOVER

The proposed mandatory standards requiring roll-over protective structures (ROPS) and seat belts applies to certain described self-propelled equipment including "wheeled prime movers." The objection is that the term "prime movers," is too broadly defined in SAE J320b which is incorporated by reference and that a piece of equipment which is subject to a mandatory standard should be sufficiently described so that anyone operating that equipment will know whether or not the standard applies to it. The definition contained in Section 2, Scope of SAE Recommended Practice J320b (Government Exhibit 1: 1974 SAE Handbook p. 1529) provides as follows (Tr. 88):

> These criteria apply to pneumatic-tired prime movers such as those used to pull scrapers, water wagons, bottom dump wagons, side dump wagons, rear dump wagons, and towed fifth wheel attachments. (See SAE J869, J728, and J734 for description and nomenclature.)

It would be difficult to conceive of any self-propelled equipment that would not fit some part of that definition. Also accordingly to the testimony, in the mining industry, a wheeled prime mover may be a tractor of the type normally used to pull or push a scraper unit "but it can be used to pull a wagon, as well" (TR 103). In accordance with the principle that mandatory standards should be as clear as possible, I am also including a further clarification of the term "primer movers" in paragraph (a) of the mandatory standards and will adopt the suggestion of the American Mining Congress that they be further defined as tractors of the type and kind normally used as the mode of power for rubber-tired scrapers.

AUTHORITY OF INSPECTOR TO ACCELERATE DATE WHEN INSTALLATION OF ROPS WILL BE REQUIRED

Paragraph (c) of proposed mandatory standards sets various dates by which roll-over protective structures (ROPS) would be required on particular equipment, depending upon the date of manufacture. The proposed standard also states that an inspector may require installation of roll-over protective structures (ROPS) at an earlier date "when necessary to protect the operator of the equipment under the conditions in which the equipment is, or will be operated." A similar provision is provided in 30 CFR 77.403a applicable to surface coal mines and surface areas of underground coal mines. The statute under which the proposed mandatory standards are being promulgated, however, requires that such mandatory standards be based upon the record presented at the hearing. No evidence was presented at the hearing which would establish the necessity for a provision allowing an inspector to alter the

mandatory standard whenever the inspector thought it necessary to do so for the protection of the equipment operator. The entire purpose of issuing a mandatory standard is because the Secretary of the Interior deems that such a standard is "necessary to protect the operator of the equipment." An inspector has authority to withdraw equipment if an imminent danger develops, but short of that imminent danger he will not be authorized to accelerate the date of compliance contained in the mandatory standard. The dates by which equipment shall be equipped with ROPS will be determined by the date established by the Secretary for the standards to become promulgated in the FEDERAL REGISTER.

REPAIR OF ROLL-OVER PROTECTIVE STRUCTURES (ROPS)

Under section (f) of the proposed mandatory standards, all repair and welding of roll-over protective structures (ROPS) and their frame mounts shall be performed "only with prior approval and with instructions" from the manufacturer, and all welding shall be done by welders qualified in accordance with certain specifications. No provision is made in the proposed standards for the repair of roll-over protective structures (ROPS) where the manufacturer thereof is either out of business or incapable of giving instructions for their repair for some reason. At the hearing it was suggested that a satisfactory alternative to the requirement that approval and instructions be obtained from the manufacturer would be the requirement of approval and instructions from a registered professional engineer. The standard has been modified to require approval and instructions from either the manufacturer, or a registered professional engineer without regard to whether the manufacturer at that particular time is in business and capable of supplying the necessary instructions.

The proposed mandatory standard would require that all welding be performed by welders qualified in accordance with certain standards published by the American Welding Society. At the hearing Mr. Davis, a staff engineer for the American Welding Society, testified at length concerning the qualifications of welders. His organization does not certify or qualify welders but merely sets up a testing procedure by which anyone capable of administering the test could qualify the individual welder. This could be the mining company itself or some laboratory, but there are no standards as to who is qualified to administer the test and issue the qualifying certificate. Under the circumstances it appears that qualification in accordance with the American Welding Society standard will not assure safe and proper welds. According to the testimony, only 25 to 35 percent of welders have been qualified under that standard and many of those welders not so qualified are nevertheless highly skilled welders. In my opinion the entire qualifying procedure is too tenuous to be incorporated in these mandatory standards. Inasmuch as I have decided that either a ROPS manufacturer or a qualified professional engineer may administer approval and give instructions for repair of ROPS, the mandatory standards will allow either the ROPS manufacturer or a registered professional engineer to decide what qualifications welders making such repairs must have.

REQUESTS FOR EXEMPTION OF CERTAIN TYPES OF OPERATION

Opponents of the proposed mandatory standards have contended that a mandatory standard requiring roll-over protective structures (ROPS) and seat belts should not apply to equipment used primarily underground, equipmend used primarily near deep water, and equipment used primarily on high benches or cliffs.

As to the requested exemption for equipment operated primarily underground, the proponents seem mainly concerned with convenience. It is not a hazard to operate equipment used primarily underground with ROPS, or at least there was no evidence to that effect, but it is more convenient underground without ROPS and, of course, attaching and detaching ROPS would be an inconvenience. In my opinion, however, there was not sufficient evidence in the record to justify exclusion of this type of equipment and accordingly, no such exemption will be contained in the mandatory standards.

The case for excluding equipment operated near deep water or near the edges of high benches was not persuasive. It was pointed out that roll-over protection is primarily protection from injury when the equipment is rolled. The structures are not designed to withstand falls from high benches or cliffs. Mr. Richard W. Goodall, Chief of the Safety Office, United States Army Corps of Engineers, stated that his organization did not require ROPS when the equipment is being worked on barges and that a man should never be strapped in if he is subject to a large drop. Such extraordinary situations must be kept in perspective. During the past four years there have been only two fatalities on metal and nonmetal mining properties involving equipment going over the edge of a high bench and one of these reported fatalities involved a possible heart attack victim (Tr. 96). An analysis made of fatalities due to tractor roll-overs that were reported to the Oregon State Industrial Commission during the period of January 1, 1954, through November 1954 indicated that the movement of an overturning tractor is too fast to allow the operator to escape once the machine has started overturning (Tr. 293). Also, of the forty roll-overs involving equipment with roll-over protective structures used on sites under construction contracts with the United States Corps of Engineers during the period between January 1, 1968, through December 1971, one fatality resulted when the equipment operator jumped the wrong way (Tr. 292). The inherent dangers incident to equipment falling from a high bench or cliff or into deep water is much greater than when such equipment overturns. When an equipment operator has sufficient warning before his equipment is about to fall from a high place or into deep water, the survival techniques or options available to the operator may include leaping from the equipment within sufficient time so that the ROPS and use of seat belts are not adverse factors. Mr. Marvin Knaffla, a heavy equipment operator in an open pit mining operation testified that the installation of ROPS and seat belts is not a deterrent to getting off of the equipment while operating near any sheer drop (Tr. 319–320). Mr. Knaffla stated further, however, that under the circumstances he probably would not wear a seat belt (Tr. 320). Based on the foregoing I find that the installation of roll-over protective structures (ROPS) and the installation and discretionary use of seat belts are not of themselves hazardous to the equipment operator. This finding is further supported by the fact that there are no exceptions for equipment being operated near high places or deep water in the ROPS standards promulgated under the Federal Coal Mine Health and Safety Act of 1969 and the Occupational Safety and Health Act of 1970. However, in the event a mine operator desires an exception to the requirements of these standards, he has the option of applying for a variance under 30 CFR 55.24, 56.24, and 57.24, respectively.

FALLING OBJECT PROTECTION

The proponents of an exception for equipment already fitted with falling object protection offer essentially an economic argument. Basically, the argument is since they have already spent money in installing falling object protection they should not be required to install roll-over protection. But if a falling object protective structure is unable to protect the operator of the equipment in the event of a roll-over, the fact that a financial burden is involved in installing the roll-over protective structures (ROPS) is not persuasive. Therefore, if the falling object protective structure is strong enough to protect the equipment operator in the event of a roll-over, it will be acceptable, but if not, roll-over protective structures (ROPS) will either have to be added to or substituted for the existing structures.

INCORPORATED BY REFERENCE OF STANDARDS

In my opinion, if the mandatory standards were to physically contain every word of the various standards incorporated by reference, it would be unduly bulky and difficult to work with. The material to be incorporated by reference is readily available for those who wish to examine it.

INFORMATION PERMANENTLY AFFIXED TO ROLL-OVER PROTECTIVE STRUCTURES (ROPS)

Under paragraph (g) all roll-over protective structures (ROPS) must contain the manufacturer's or fabricator's name and address, the ROPS model number

and the make and model of equipment upon which the ROPS is designed to fit. However, for existing roll-over protective structures which do not contain the required information, a satisfactory substitute will be a certificate from either the manufacturer or a professional engineer to the effect that the ROPS does meet the performance criteria and is appropriate for the piece of equipment upon which it is installed.

REQUEST THAT PLACING ORDERS FOR ROLL-OVER PROTECTIVE STRUCTURES BE CONSIDERED EQUIVALENT TO INSTALLATION

Paragraph (c)(1)–(3) provides a reasonable period of time within which mine operators must have roll-over protective structures (ROPS) and seat belts installed on their equipment. An order for roll-over protective structures cannot protect the operator of the equipment, and the suggested revision would leave far too much room for evasion.

All proposed findings submitted by the parties that are not included in the above opinion or in the mandatory standards set forth hereinafter are rejected.

55.9–87, 56.9–87, and 57.9–87 which are renumbered 55.9–88, 56.9–88, and 57.9–88 are set forth below and are hereby adopted as the final decision of the Secretary of the Interior and are applicable to surface only.

__.9–88 *Mandatory.* (a) Excluding equipment that is operated by remote control, all self-propelled track-type (crawler mounted) or wheeled (rubber-tired) scrapers; front-end loaders; dozers; tractors, including industrial and agricultural tractors but not including over-the-road type tractors (the type that pull trailers or vans on highways); and motor graders; and wheeled prime movers (a tractor of the type and kind normally used as the mode of power for rubber-tired scrapers); all as used in metal and nonmetal mining operations, with or without attachments, shall be used in such mining only when equipped with (1) roll-over protective structures (ROPS) in accordance with the requirements of paragraphs (b) through (g) of this standard, as applicable, and (2) seat belts meeting the requirements of the Society of Automotive Engineers (SAE), Motor Vehicle Seat Belts Assemblies—SAE J4c, approved November 1955, revised July 1965; Seat Belt Hardware Test Procedures—SAE J140a, approved April 1970, revised February 1973; Seat Belt Hardware Performance Requirements—SAE J141; Operator Protection for Wheel Type Agricultural and Industrial Tractors—SAE J833a, approved April 1968, revised July 1970, conforms to ASAE S305; and Seat Belts for Construction Equipment—SAE J386, approved March 1968; and, in accordance with paragraphs (b) (c), and (e) of this standard, as applicable.

(b) Except as provided in paragraph (e) all self-propelled equipment described in paragraph (a) of this standard and manufactured on or after the effective date of this standard shall be equipped with (1) ROPS meeting the requirements of paragraph (d), and (2) seat belts meeting the requirements of SAE J4c, J140a, J141, J333a, and J386 specified in paragraph (a) of this standard.

(c) All self-propelled equipment described in paragraph (a) of this standard manufactured prior to the effective date of this standard and after June 30, 1969, shall be equipped with ROPS meeting the requirements of paragraphs (d) through (g) of this standard as appropriate, and seat belts, no later than the dates specified below:

(1) Equipment manufactured between July 1, 1971, and the effective date of this standard shall be equipped with ROPS and seat belts no later than 6 months after the effective date of this standard.

(2) Equipment manufactured between July 1, 1970, and June 30, 1971, shall be equipped with ROPS and seat belts no later than 10 months after the effective date of this standard.

(3) Equipment manufactured between July 1, 1969, and June 30, 1970, shall be equipped with ROPS and seat belts no later than 16 months after the effective date of this standard.

(4) Nothing in this standard shall preclude the issuance of an order because of imminent danger.

(d) Except as provided in paragraph (e) of this standard, self-propelled equipment described in paragraph (a) of this standard shall be deemed in compliance with the ROPS requirements of the standard if the ROPS meet the following requirements:

(1) The ROPS complies with the Society of Automotive Engineers, SAE Recommended Practice, Critical Zone—Characteristics and Dimensions for Operators of Construction and Industrial Machinery—SAE J397, approved July 1969, or Deflection Limiting Volume for Laboratory Evaluation of Roll-Over-Protective Structures (ROPS) and Falling Object Protective Structures (FOPS) of Construction and Industrial Vehicles—SAE J397a, approved July 1969, revised January 1972, editorial change, July 1973; and, as appropriate, the ROPS and installation of the ROPS meet the requirements of either SAE Recommended Practice, Performance Criteria for Roll-Over Protective Structures (ROPS) for Earthmoving, Construction, Logging, and Industrial Vehicles—SAE J1040, approved April 1974, or any of the following applicable SAE Standards or Recommended Practices:

(i) Minimum Performance Criteria for Roll-Over Protective Structure for Rubber-Tired, Self-Propelled Scrapers—SAE J320a, approved November 1967, revised July 1969, editorial change June 1970; or

(ii) Minimum Performance Criteria for Roll-Over Protective Structures for Prime-Movers—SAE J320b, approved November 1967, revised January 1972, editorial change September 1972; or

(iii) Minimum Performance Criteria for Roll-Over Protective Structures for Rubber-Tired Front End-Loaders and Rubber-Tired Dozers—SAE J394, approved July 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Wheeled Front-End Loaders and Wheeler Dozers—SAE J394a, approved July 1969, revised March 1972, editorial change September 1972; or

(iv) Minimum Performance Criteria for Roll-Over Structures for Crawler Tractors and Crawler-Type Loaders—SAE J395, approved July 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Track-Type Tractors and Tractor-Type Front-End Loaders—SAE J395a, approved July 1969, revised January 1972, editorial change September 1972; and

(v) Minimum Performance Criteria for Roll-Over Protective Structure for Motor Graders—J396, approved 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Motor Graders—SAE J396a, approved July 1969, revised March 1972, editorial change September 1972; or

(vi) Operator Protection for Wheel Type Agricultural and Industrial Tractors—SAE J333a, approved April 1968, revised July 1970, conforms to ASAE S305; and Protective Frame Test Procedure and Performance Requirements—SAE J334a, approved April 1968, revised July 1970, conforms to ASAE S306.

(2) The ROPS is installed on the equipment in accordance with the recommendations of the ROPS manufacturer. If the installation includes bolts and nuts, the bolts and nuts used to attach the ROPS to the equipment frame and to connect structural parts of the ROPS shall be SAE Grade 5 or 8 (SAE J429g and J995b).

(e) All self-propelled equipment described in paragraph (a) of this standard, manufactured prior to the effective date of this standard, shall be deemed in compliance with the standard if ROPS and seat belt installations meet the ROPS and seat belt requirements of the State of California; or the U.S. Army Corps of Engineers; or the Bureau of Reclamation, or MESA coal mine regulations, of the U.S. Department of the Interior; or the Occupational Safety and Health Administration of the U.S. Department of Labor. The requirements in effect are:

(1) State of California: Title 8 of the California Administrative Code: Construction Safety Orders, Article 10, "Haulage and Earth Moving." 1591(i) and 1596 (Register 70, No. 40—October 3, 1970); General Industry Safety Orders, Article 25, "Industrial Trucks, Tractors, Haulage Vehicles, and Earth Moving Equipment," 3650–55 (Register 72, No. 6—February 5, 1972); and Logging and Sawmill Safety Orders, Article 7, "Tractor Yarding," 5243 (Register 69, No. 10—March 8, 1969), all issued by the Division of Industrial Safety, State of California.

(2) U.S. Army Corps of Engineers: Manuals—Corps of Engineers, U.S. Army Safety-General Requirements, EM–385–1–1 (March 1967), or Change 1, March 27, 1972.

(3) Bureau of Reclamation, U.S. Department of the Interior: Section 9, "Machinery and Mechanized Equipment," Safety and Health Regulations for Construction, Part II—Bureau of Reclamation (September 1971).

(4) Mining Enforcement and Safety Administration, U.S. Department of the Interior: § 77.403a, Part 77, Title 30, Code of Federal Regulations—Mandatory Safety Standards, Surface Coal Mines and Surface Work Areas of Underground Coal Mines, promulgated in the FEDERAL REGISTER (39 FR 24006–24009).

(5) Occupational Safety and Health Administration, U.S. Department of Labor: Sections 1926.1001 and 1926.1002, Title 29, Code of Federal Regulations—Safety and Health Regulations for Construction, promulgated in the FEDERAL REGISTER (37 FR 27585–27590), and republished in the FEDERAL REGISTER (39 FR 22880–22886).

(f) Any alteration, repair, or welding of the ROPS and ROPS-to-vehicle frame mounts shall be performed only with prior approval and with instructions from the ROPS manufacturer or under the instructions of a registered professional engineer; and the manufacturer, or engineer, as the case may be, shall decide what qualifications the welders involved in this operation must have.

(g) Each ROPS shall have the following information permanently affixed to the structure:

(1) Manufacturer's or fabricator's name and address; and

(2) ROPS model number, if any; and

(3) Make and model numbers of the equipment on which the ROPS is designed to fit.

(4) For equipment already in existence when this standard goes into effect, a satisfactory substitute for the above-required information will be a certificate from either the manufacturer of the ROPS or a regis-

tered professional engineer to the effect that the ROPS does meet the performance standards and is appropriate for the piece of equipment upon which it is installed.

(h) Publications to which references are made in this standard are hereby incorporated by reference and made a apart hereof. The incorporated publications are available at each Metal and Nonmetal Mine Health and Safety Subdistrict Office, MESA. State of California safety orders are available from the State of California Office of Procurement, Documents Section, Post Office Box 20191, Sacramento, California 95820. The U.S. Army Corps of Engineers, Safety-General Safety Requirements are available from the U.S. Government Printing Office, Washington, D.C. 20402. Bureau of Reclamation Safety and Health Regulations for Construction are available from the Bureau of Reclamation, Division of Safety, Engineering and Research Center, Denver, Colorado 80225. SAE documents are available from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, Pennsylvania 15096.

[FR Doc.77-2459 Filed 2-3-77;8:45 am]

HEALTH AND SAFETY STANDARDS; METAL AND NONMETALLIC OPEN PIT AND UNDERGROUND MINES AND SAND, GRAVEL, AND CRUSHED STONE OPERATIONS

Roll-Over Protective Structures (ROPS) and Seat Belts for Self-Propelled Equipment

On October 24, 1974, a notice of proposed rulemaking was published in Part IV of the FEDERAL REGISTER (39 FR 37958–37961) proposing to amend and renumber advisory standards 30 CFR 55.14–12, 56.14–12, and 57.14–12 relating to roll protection for industrial vehicles such as fork-lift trucks, front-end loaders, and bulldozers. The proposed standards 55.9–87, 56.9–87, 57.9–87 made the advisory standards mandatory and applicable to surface only, and revised such standards to provide engineering or performance criteria for the design, construction, and installation of roll-over protective structures (ROPS) and seat belts on certain specified self-propelled equipment.

Proposed mandatory standards 55.9–87, 56.9–87, and 57.9–87 were developed in accordance with the rulemaking provisions of section 6 of the Federal Metal and Nonmetallic Mine Safety Act (30 U.S.C. 725 (1970)). The Federal Metal and Nonmetal Mine Safety Advisory Committee, which is authorized to be established under section 7 of the Act (30 U.S.C. 726 (1970)) and established in accordance with section 9 of the Federal Advisory Committee Act (5 U.S.C., Appendix I (Supp. V 1975)), was in favor of revising the existing advisory standards and making their requirements mandatory. However, the Advisory Committee did not recommend the specific language of the proposed standards. Therefore, under section 6(c) of the Act, the proposed revisions to the existing advisory standards are proposals which the Secretary of the Interior proposed to promulgate and to designate as "Mandatory" standards. Under section 6(d)(1) of the Act, any person who may be adversely affected by the proposed mandatory standards which have been designated as "Mandatory" standards by the Secretary and which have not been recommended as "Mandatory" standards by the Advisory Committee could file written objections and request a public hearing subject to the Administrative Procedure Act (5 U.S.C. 556 and 557) on such objections.

All data, views, arguments, and objections received in response to the proposals have been carefully reviewed and considered. Included among the letter responses submitting comments and objections to the proposals were letters containing requests for public hearing filed by the American Mining Congress, the National Crushed Stone Association, the National Sand and Gravel Association, and the State Contracting and Stone Company.

On May 5, 1975, a notice of public hearing was published in the FEDERAL REGISTER (40 FR 19498–19500) which set forth the objections which had been filed and upon which a public hearing had been requested. This notice advised all interested persons and organizations that a public hearing would be held on Wednesday, June 4, 1975, and Thursday, June 5, 1975, in Dallas, Texas and that the hearing would be conducted by an Administrative Law Judge, Office of Hearings and Appeals, Department of the Interior, who would receive evidence relevant and material to the issues raised by the objections which had been filed. The notice provided that the Administrative Law Judge presiding over the public hearing had all the powers necessary and appropriate to conduct a fair, full, and impartial hearing including the powers provided in 5 U.S.C. 556(c)(1) through (7). The notice further provided that the Administrative Law Judge would consider all objections and based upon the record submit recommended decision to the Secretary of the Interior who would review the recommended decision and issue the final decision.

The public hearing commenced at 9 a.m., c.d.t. on June 4, 1975, and closed at 2:10 p.m., on June 5, 1975. At the conclusion of the hearing the parties were allowed to file statements and arguments in support of their respective positions on or before August 10, 1975. Administrative Law Judge Charles C. Moore, Jr., who presided at the hearing, submitted a "Recommended Decision" dated November 18, 1975, to the Secretary of the Interior on April 16, 1976.

Section 6(d)(2) of the Act provides that as soon as practicable after completion of the public hearing the Secretary of the Interior shall act upon the objections that were subject to the hearing and to make his decision public. Based upon the substantial evidence of record and after reviewing the recommended decision the Secretary has made his final decision. The final decision is published above.[1] Under section 6(d)(3) persons aggrieved by the decision may obtain judicial review by the United States Court of Appeals for the District of Columbia by filing a petition with the Court within 20 days following promulgation of the standards.

Since standard numbers 55.9–87, 56.9–87, and 57.9–87 were assigned to mandatory standards requiring audible warning devices on heavy duty mobile equipment and were promulgated in Part IV of the FEDERAL REGISTER for June 10, 1976 (41 FR 23612, at 23613, 23615, and 23617, respectively) proposed mandatory standards §§ 55.9–87, 56.9–87, 57.9–87 will be renumbered §§ 55.9–88, 56.9–88, and 57.9–88.

Parts 55, 56, and 57, Subchapter N, Chapter I, Title 30 Code of Federal Regulations are amended and revised as set forth below.

Effective date: The amendments and revisions of standards shall be effective on February 4, 1977.

Dated: January 31, 1977.

W. W. LYONS,
DEPUTY UNDER SECRETARY
OF THE INTERIOR

[1] See FR Doc 77-2460 also published in this separate part of the FEDERAL REGISTER.

PART 55—HEALTH AND SAFETY STANDARDS—METAL AND NONMETALLIC OPEN PIT MINES

1. Section 55.9 Loading, hauling, dumping is amended as follows: New mandatory standard 55.9–88 is added to read as follows:

§ 55.9 Loading, hauling, dumping.

* * * * *

55.9–88 *Mandatory.* (a) Excluding equipment that is operated by remote control, all self-propelled track-type (crawler mounted) or wheeled (rubber-tired) scrapers; front-end loaders; dozers; tractors, including industrial and agricultural tractors but not including over-the-road type tractors (the type that pull trailers or vans on highways); and motor graders; and wheeled prime movers (a tractor of the type and kind normally used as the mode of power for rubber-tired scrapers); all as used in metal and nonmetal mining operations, with or without attachments, shall be used in such mining only when equipped with (1) rollover protective structures (ROPS) in accordance with the requirements of paragraphs (b) through (g) of this standard, as applicable, and (2) seat belts meeting the requirements of the Society of Automotive Engineers (SAE), Motor Vehicle Seat Belts Assemblies—SAE J4c, approved November 1955, revised July 1965; Seat Belt Hardware Test Procedures—SAE J140a, approved April 1970, revised February 1973; Seat Belt Hardware Performance Requirements—SAE J141; Operator Protection for Wheel Type Agricultural and Industrial Tractors—SAE J333a, approved April 1968, revised July 1970, conforms to ASAE S305; and Seat Belts for Construction Equipment—SAE J386, approved March 1968; and, in accordance with paragraphs (b), (c), and (e) of this standard, as applicable.

(b) Except as provided in paragraph (e) all self-propelled equipment described in paragraph (a) of this standard and manufactured on or after the effective date of this standard shall be equipped with (1) ROPS meeting the requirements of paragraph (d), and (2) Seat belts meeting the requirements of SAE J4c, J140a, J141, J333a, and J386

specified in paragraph (a) of this standard.

(c) All self-propelled equipment described in paragraph (a) of this standard manufactured prior to the effective date of this standard and after June 30, 1969, shall be equipped with ROPS meeting the requirements of paragraphs (d) through (g) of this standard as appropriate, and seat belts, no later than the dates specified below:

(1) Equipment manufactured between July 1, 1971, and the effective date of this standard shall be equipped with ROPS and seat belts no later than 6 months after the effective date of this standard.

(2) Equipment manufactured between July 1, 1970, and June 30, 1971, shall be equipped with ROPS and seat belts no later than 10 months after the effective date of this standard.

(3) Equipment manufactured between July 1, 1969, and June 30, 1970, shall be equipped with ROPS and seat belts no later than 16 months after the effective date of this standard.

(4) Nothing in this standard shall preclude the issuance of an order because of imminent danger.

(d) Except as provided in paragraph (e) of this standard, self-propelled equipment described in paragraph (a) of this standard shall be deemed in compliance with the ROPS requirements of this standard if the ROPS meet the following requirements:

(1) The ROPS complies with the Society of Automotive Engineers, SAE Recommended Practice, Critical Zone—Characteristics and Dimensions for Operators of Construction and Industrial Machinery—SAE J397, approved July 1969, or Deflection Limiting Volume for Laboratory Evaluation of Roll-Over Protective Structures (ROPS) and Falling Object Protective Structures (FOPS) of Construction and Industrial Vehicles—SAE J397a, approved July 1969, revised January 1972, editorial change, July 1973; and, as appropriate, the ROPS and installation of the ROPS meet the requirements of either SAE Recommended Practice, Performance Criteria for Roll-Over Protective Structures (ROPS) for Earthmoving, Construction, Logging, and Industrial Vehicles—SAE J1040, approved April 1974, or any of the following applicable SAE Standards or Recommended Practices:

(i) Minimum Performance Criteria for Roll-Over Protective Structure for Rubber-Tired, Self-Propelled Scrapers—SAE J320a, approved November 1967, revised July 1969, editorial change June 1970; or

(ii) Minimum Performance Criteria for Roll-Over Protective Structures for Prime Movers—SAE J320b, approved November 1967, revised January 1972, editorial change September 1972; or

(iii) Minimum Performance Criteria for Roll-Over Protective Structure for Rubber-Tired Front End Loaders and Rubber-Tired Dozers—SAE J394, approved July 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Wheeled Front-End Loaders and Wheeled Dozers—SAE J394a, approved July 1969, revised March 1972, editorial change September 1972; or

(iv) Minimum Performance Criteria for Roll-Over Structures for Crawler Tractors and Crawler-Type Loaders—SAE J395, approved July 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Track-Type Tractors and Track-Type Front-End Loaders—SAE J395a, approved July 1969, revised January 1972, editorial change September 1972; or

(v) Minimum Performance Criteria for Roll-Over Protective Structure for Motor Graders—J396, approved 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Motor Graders—SAE J396a, approved July 1969, revised March 1972, editorial change September 1972; or

(vi) Operator Protection for Wheel Type Agricultural and Industrial Tractors—SAE J333a, approved April 1968, revised July 1970, conforms to ASAE S305; and Protective Frame Test Procedure and Performance Requirements—SAE J334a, approved April 1968, revised July 1970, conforms to ASAE S306.

(2) The ROPS is installed on the equipment in accordance with the recommendations of the ROPS manufacturer. If the installation includes bolts and nuts, the bolts and nuts used to attach the ROPS to the equipment frame and to connect structural parts of the ROPS shall be SAE Grade 5 or 8 (SAE J429g and J995b).

(e) All self-propelled equipment described in paragraph (a) of this standard, manufactured prior to the effective date of this standard, shall be deemed in compliance with the standard if ROPS and seat belt installations meet the ROPS and seat belt requirements of the State of California; or the U.S. Army Corps of Engineers; or the Bureau of Reclamation, or MESA coal mine regulations, of the U.S. Department of the Interior; or the Occupational Safety and Health Administration of the U.S. Department of Labor. The requirements in effect are:

(1) State of California: Title 8 of the California Administrative Code: Construction Safety Orders, Article 10, "Haulage and Earth Moving." 1591(1) and 1596 (Register 70, No. 40—10–3–70); General Industry Safety Orders, Article 25, "Industrial Trucks, Tractors, Haulage Vehicles, and Earth Moving Equipment," 3650–55 (Register 72, No. 6—2–5–72); and Logging and Sawmill Safety Orders, Article 7, "Tractor Yarding," 5243 (Register 69, No. 10—3–8–69), all issued by the Division of Industrial Safety, State of California.

(2) U.S. Army Corps of Engineers: Manuals—Corps of Engineers, U.S. Army Safety-General Requirements, EM–385–1–1 (March 1967), or Change 1, March 27, 1972.

(3) Bureau of Reclamation, U.S. Department of the Interior: Section 9, "Machinery and Mechanized Equipment," Safety and Health Regulations for Construction, Part II—Bureau of Reclamation (September 1971).

(4) Mining Enforcement and Safety Administration, U.S. Department of the Interior: Section 77.403a, Part 77, Title 30, Code of Federal Regulations—Mandatory Safety Standards, Surface Coal Mines and Surface Work Areas of Underground Coal Mines, promulgated in the FEDERAL REGISTER (39 FR 24006–24009).

(5) Occupational Safety and Health Administration, U.S. Department of Labor: Sections 1926.1001 and 1926.1002, Title 29, Code of Federal Regulations—Safety and Health Regulations for Construction, promulgated in the FEDERAL REGISTER (37 FR 27585–27590), and republished in the FEDERAL REGISTER (39 FR 22880–22886).

(f) Any alteration, repair, or welding of the ROPS and ROPS-to-vehicle frame mounts shall be performed only with prior approval and with instructions from the ROPS manufacturer or under the instructions of a registered professional engineer; and the manufacturer, or engineer, as the case may be, shall decide what qualifications the welders involved in this operation must have.

(g) Each ROPS shall have the following information permanently affixed to the structure:

(1) Manufacturer's or fabricator's name and address; and

(2) ROPS model number, if any; and

(3) Make and model numbers of the equipment on which the ROPS is designed to fit.

(4) For equipment already in existence when this standard goes into effect, a satisfactory substitute for the above-required information will be a certificate from either the manufacturer of the ROPS or a registered professional engineer to the effect that the ROPS does meet the performance standards and is appropriate for the piece of equipment upon which it is installed.

(h) Publications to which references are made in this standard are hereby incorporated by reference and made a part hereof. The incorporated publications are available at each Metal and Nonmetal Mine Health and Safety Subdistrict Office, MESA. State of California safety orders are available from the State of California Office of Procurement, Documents Section, Post Office Box 20191, Sacramento, California 95820. The U.S. Army Corps of Engineers, Safety-General Safety Requirements are available from the U.S. Government Printing Office, Washington, D.C. 20402. Bureau of Reclamation Safety and Health Regulations for Construction are available from the Bureau of Reclamation, Division of Safety, Engineering and Research Center, Denver, Colorado 80225. SAE documents are available from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, Pennsylvania 15096.

* * * * *

2. Section 55.14 Use of Equipment is amended as follows: advisory standard 55.14–12 is revoked and standard number 55.14–12 is reserved.

§ 55.14 Use of Equipment.

* * * * *

55.14–12 [Reserved].

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PART 56—HEALTH AND SAFETY STANDARDS—SAND, GRAVEL, AND CRUSHED STONE OPERATIONS

1. Section 56.9 Loading, hauling, dumping is amended as follows and new mandatory standard 56.9–88 is added to read as follows:

§ 56.9 Loading, hauling, dumping.

* * * * *

56.9–88 *Mandatory.* (a) Excluding equipment that is operated by remote control, all self-propelled track-type (crawler mounted) or wheeled (rubber-tired) scrapers; front-end loaders; dozers; tractors, including industrial and agricultural tractors but not including over-the-road type tractors (the type that pull trailers or vans on highways); and motor graders; and wheeled prime movers (a tractor of the type and kind normally used as the mode of power for rubber-tired scrapers); all as used in metal and nonmetal mining operations, with or without attachments, shall be used in such mining only when equipped with (1) Roll-over protective structures (ROPS) in accordance with the requirements of paragraphs (b) through (g) of this standard, as applicable, and (2) seat belts meeting the requirements of the Society of Automotive Engineers (SAE), Motor Vehicle Seat Belts Assemblies—SAE J4c, approved November 1955, revised July 1965; Seat Belt Hardware Test Procedures—SAE J140a, approved April 1970, revised February 1973; Seat Belt Hardware Performance Requirements—SAE J141; Operator Protection for Wheel Type Agricultural and Industrial Tractors—SAE J333a, approved April 1968, revised July 1970, conforms to ASAE S305; and Seat Belts for Construction Equipment—SAE J386, approved March 1968; and, in accordance with paragraphs (b), (c), and (e) of this standard, as applicable.

(b) Except as provided in paragraph (e) all self-propelled equipment described in paragraph (a) of this standard and manufactured on or after the effective date of this standard shall be equipped with

(1) ROPS meeting the requirements of paragraph (d), and
(2) Seat belts meeting the requirements of SAE J4c, J140a, J141, J333a, and J386 specified in paragraph (a) of this standard.

(c) All self-propelled equipment described in paragraph (a) of this standard manufactured prior to the effective date of this standard and after June 30, 1969, shall be equipped with ROPS meeting the requirements of paragraphs (d) through (g) of this standard as appropriate, and seat belts, no later than the dates specified below:

(1) Equipment manufactured between July 1, 1971, and the effective date of this standard shall be equipped with ROPS and seat belts no later than 6 months after the effective date of this standard.

(2) Equipment manufactured between July 1, 1970, and June 30, 1971, shall be equipped with ROPS and seat belts no later than 10 months after the effective date of this standard.

(3) Equipment manufactured between July 1, 1969, and June 30, 1970, shall be equipped with ROPS and seat belts no later than 16 months after the effective date of this standard.

(4) Nothing in this standard shall preclude the issuance of an order because of imminent danger.

(d) Except as provided in paragraph (e) of this standard, self-propelled equipment described in paragraph (a) of this standard shall be deemed in compliance with the ROPS requirements of this standard if the ROPS meet the following requirements:

(1) The ROPS complies with the Society of Automotive Engineers, SAE Recommended Practice, Critical Zone—Characteristics and Dimensions for Operators of Construction and Industrial Machinery—SAE J397, approved July 1969, or Deflection Limiting Volume for Laboratory Evaluation of Roll-Over Protective Structures (ROPS) and Falling Object Protective Structures (FOPS) of Construction and Industrial Vehicles—SAE J397a, approved July 1969, revised January 1972, editorial change, July 1973; and, as appropriate, the ROPS and installation of the ROPS meet the requirements of either SAE Recommended Practice, Performance Criteria for Roll-Over Protective Structures (ROPS) for Earthmoving, Construction, Logging, and Industrial Vehicles—SAE J1040, approved April 1974, or any of the following applicable SAE Standards or Recommended Practices:

(i) Minimum Performance Criteria for Roll-Over Protective Structure for Rubber-Tired, Self-Propelled Scrapers—SAE J320a, approved November 1967, revised July 1969, editorial change June 1970; or

(ii) Minimum Performance Criteria for Roll-Over Protective Structures for Prime Movers—SAE J320b, approved November 1967, revised January 1972, editorial change September 1972; or

(iii) Minimum Performance Criteria for Roll-Over Protective Structure for Rubber-Tired Front End Loaders and Rubber-Tired Dozers—SAE J394, approved July 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Wheeled Front-End Loaders and Wheeled Dozers—SAE J394a, approved July 1969, revised March 1972, editorial change September 1972; or

(iv) Minimum Performance Criteria for Roll-Over Structures for Crawler Tractors and Crawler-Type Loaders—SAE J395, approved July 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Track-Type Tractors and Track-Type Front-End Loaders—SAE J395a, approved July 1969, revised January 1972, editorial change September 1972; or

(v) Minimum Performance Criteria for Roll-Over Protective Structure for Motor Graders—J396, approved 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Motor Graders—SAE J396a, approved July 1969, revised March 1972, editorial change September 1972; or

(vi) Operator Protection for Wheel Type Agricultural and Industrial Tractors—SAE J333a, approved April 1968, revised July 1970, conforms to ASAE S305; and Protective Frame Test Procedure and Performance Requirements—SAE J334a, approved April 1968, revised July 1970, conforms to ASAE S306.

(2) The ROPS is installed on the equipment in accordance with the recommendations of the ROPS manufacturer. If the installation includes bolts and nuts, the bolts and nuts used to attach the ROPS to the equipment frame and to connect structural parts of the ROPS shall be SAE Grade 5 or 8 (SAE J429g and J995b).

(e) All self-propelled equipment described in paragraph (a) of this standard, manufactured prior to the effective date of this standard, shall be deemed in compliance with the standard if ROPS and seat belt installations meet the ROPS and seat belt requirements of the State of California; or the U.S. Army Corps of Engineers; or the Bureau of Reclamation, or MESA coal mine regulations, of the U.S. Department of the Interior; or the Occupational Safety and Health Administration of the U.S. Department of Labor. The requirements in effect are:

(1) State of California: Title 8 of the California Administrative Code: Construction Safety Orders, Article 10, "Haulage and Earth Moving." 1591 (1) and 1596 (Register 70, No. 40—10–3–70); General Industry Safety Orders, Article 25, "Industrial Trucks, Tractors, Haulage Vehicles, and Earth Moving Equipment," 3650–55 (Register 72, No. 6—2–5–72); and Logging and Sawmill Safety Orders, Article 7, "Tractor Yarding," 5243 (Register 69, No. 10—3–8–69), all issued by the Division of Industrial Safety, State of California.

(2) U.S. Army Corps of Engineers: Manuals—Corps of Engineers, U.S. Army Safety-General Requirements, EM–385–1–1 (March 1967), or Change 1, March 27, 1972.

(3) Bureau of Reclamation, U.S. Department of the Interior: Section 9, "Machinery and Mechanized Equipment," Safety and Health Regulations for Construction, Part II—Bureau of Reclamation (September 1971).

(4) Mining Enforcement and Safety Administration, U.S. Department of the Interior: Section 77.403a, Part 77, Title 30 (Code of Federal Regulations—Mandatory Safety Standards, Surface Coal Mines and Surface Work Areas of Underground Coal Mines, promulgated in the FEDERAL REGISTER (39 FR 24006–24009).

(5) Occupational Safety and Health Administration, U.S. Department of Labor: Setcions 1926.1001 and 1926.1002, Title 29, Code of Federal Regulations—Safety and Health Regulations for Construction, promulgated in the FEDERAL REGISTER (37 FR 27585–27590), and republished in the FEDERAL REGISTER (39 FR 22880–22886).

(f) Any alteration, repair, or welding of the ROPS and ROPS-to-vehicle frame mounts shall be performed only with prior approval and with instructions from the ROPS manufacturer or under the instructions of a registered professional engineer; and the manufacturer, or engineer, as the case may be, shall decide what qualifications the welders involved in this operation must have.

(g) Each ROPS shall have the following information permanently affixed to the structure:

(1) Manufacturer's or fabricator's name and address; and

(2) ROPS model number, if any; and

(3) Make and model numbers of the equipment on which the ROPS is designed to fit.

(4) For equipment already in existence when this standard goes into effect, a satisfactory substitute for the above-required information will be a certificate from either the manufacturer of the ROPS or a registered professional engineer to the effect that the ROPS does meet the performance standards and is appropriate for the piece of equipment upon which it is installed.

(h) Publications to which references are made in this standard are hereby incorporated by reference and made a part hereof. The incorporated publications are available at each Metal and Nonmetal Mine Health and Safety Subdistrict Office, MESA. State of California safety orders are available from the State of California Office of Procurement, Documents Section, Post Office Box 20191, Sacramento, California 95820. The U.S. Army Corps of Engineers, Safety-General Safety Requirements are available from the U.S. Government Printing Office, Washington, D.C. 20402. Bureau of Reclamation Safety and Health Regulations for Construction are available from the Bureau of Reclamation,

Division of Safety, Engineering and Research Center, Denver, Colorado 80225. SAE documents are available from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, Pennsylvania 15096.

* * * * *

2. Section 56.14 Use of Equipment is amended as follows: Advisory standard 56.14–12 is revoked and standard number 56.14–12 is reserved.

§ 56.14 Use of Equipment.

* * * * *

56.14–12 [Reserved]

* * * * *

PART 57—HEALTH AND SAFETY STANDARDS—METAL AND NONMETALLIC UNDERGROUND MINES

1. Section 57.9 *Loading, hauling, dumping* is amended as follows: New mandatory standard 57.9–88 which is applicable to surface only is added to read as follows:

§ 57.9 Loading, hauling, dumping.

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57.9–88 *Mandatory.* (a) Excluding equipment that is operated by remote control, all self-propelled track-type (crawler mounted) or wheeled (rubber-tired) scrapers; front-end loaders; dozers; tractors, including industrial and agricultural tractors but not including over-the-road type tractors (the type that pull trailers or vans on highways); and motor graders; and wheeled prime movers (a tractor of the type and kind normally used as the mode of power for rubber-tired scrapers); all as used in metal and nonmetal mining operations, with or without attachments, shall be used in such mining only when equipped with (1) Roll-over protective structures (ROPS) in accordance with the requirements of paragraphs (b) through (g) of this standard, as applicable, and (2) seat belts meeting the requirements of the Society of Automotive Engineers (SAE), Motor Vehicle Seat Belts Assemblies—SAE J4c, approved November 1955, revised July 1965; Seat Belt Hardware Test Procedures—SAE J140a, approved April 1970, revised February 1973; Seat Belt Hardware Performance Requirements—SAE J141; Operator Protection for Wheel Type Agricultural and Industrial Tractors—SAE J333a, approved April 1968, revised July 1970, conforms to ASAE S305; and Seat Belts for Construction Equipment—SAE J386, approved March 1968; and, in accordance with paragraphs (b), (c), and (e) of this standard, as applicable.

(b) Except as provided in paragraph (e) all self-propelled equipment described in paragraph (a) of this standard and manufactured on or after the effective date of this standard shall be equipped with (1) ROPS meeting the requirements of paragraph (d), and (2) seat belts meeting the requirements of SAE J4c, J140a, J141, J333a, and J386 specified in paragraph (a) of this standard.

(c) All self-propelled equipment described in paragraph (a) of this standard manufactured prior to the effective date of this standard and after June 30, 1969, shall be equipped with ROPS meeting the requirements of paragraphs (d) through (g) of this standard as appropriate, and seat belts, no later than the dates specified below:

(1) Equipment manufactured between July 1, 1971, and the effective date of this standard shall be equipped with ROPS and seat belts no later than 6 months after the effective date of this standard.

(2) Equipment manufactured between July 1, 1970, and June 30, 1971, shall be equipped with ROPS and seat belts no later than 10 months after the effective date of this standard.

(3) Equipment manufactured between July 1, 1969, and June 30, 1970, shall be equipped with ROPS and seat belts no later than 16 months after the effective date of this standard.

(4) Nothing in this standard shall preclude the issuance of an order because of imminent danger.

(d) Except as provided in paragraph (e) of this standard, self-propelled equipment described in paragraph (a) of this standard shall be deemed in compliance with the ROPS requirements of this standard if the ROPS meet the following requirements:

(1) The ROPS complies with the Society of Automotive Engineers, SAE Recommended Practice, Critical Zone—Characteristics and Dimensions for Operators of Construction and Industrial Machinery—SAE J397, approved July 1969, or Deflection Limiting Volume for Laboratory Evaluation of Roll-Over Protective Structures (ROPS) and Falling Object Protective Structures (FOPS) of Construction and Industrial Vehicles—SAE J397a, approved July 1969, revised January 1972, editorial change, July 1973; and, as appropriate, the ROPS and installation of the ROPS meet the requirements of either SAE Recommended Practice, Performance Criteria for Roll-Over Protective Structures (ROPS) for Earthmoving, Construction, Logging, and Industrial Vehicles—SAE J1040, approved April 1974, or any of the following applicable SAE Standards or Recommended Practices:

(i) Minimum Performance Criteria for Roll-Over Protective Structure for Rubber-Tired, Self-Propelled Scrapers—SAE J320a, approved November 1967, revised July 1969, editorial change June 1970; or

(ii) Minimum Performance Criteria for Roll-Over Protective Structures for Prime Movers—SAE J320b, approved November 1967, revised January 1972, editorial change September 1972; or

(iii) Minimum Performance Criteria for Roll-Over Protective Structure for Rubber-Tired Front End Loaders and Rubber-Tired Dozers—SAE J394, approved July 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Wheeled Front-End Loaders and Wheeled Dozers—SAE J394a, approved July 1969, revised March 1972, editorial change September 1972; or

(iv) Minimum Performance Criteria for Roll-Over Structures for Crawler Tractors and Crawler-Type Loaders—SAE J395, approved July 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Track-Type Tractors and Track-Type Front-End Loaders—SAE J395a, approved July 1969, revised January 1972, editorial change September 1972; or

(v) Minimum Performance Criteria for Roll-Over Protective Structure for Motor Graders—J396, approved 1969, editorial change July 1970, or Minimum Performance Criteria for Roll-Over Protective Structures for Motor Graders—SAE J396a, approved July 1969, revised March 1972, editorial change September 1972; or

(vi) Operator Protection for Wheel Type Agricultural and Industrial Tractors—SAE J333a, approved April 1968, revised July 1970, conforms to ASAE S305; and Protective Frame Test Procedure and Performance Requirements—SAE J334a, approved April 1968, revised July 1970, conforms to ASAE S306.

(2) The ROPS is installed on the equipment in accordance with the recommendations of the ROPS manufacturer. If the installation includes bolts and nuts, the bolts and nuts used to attach the ROPS to the equipment frame and to connect structural parts of the ROPS shall be SAE Grade 5 or 8 (SAE J429g and J995b).

(e) All self-propelled equipment described in paragraph (a) of this standard, manufactured prior to the effective date of this standard, shall be deemed in compliance with the standard if ROPS and seat belt installations meet the ROPS and seat belt requirements of the State of California; or the U.S. Army Corps of Engineers; or the Bureau of Reclamation, or MESA coal mine regulations, of the U.S. Department of the Interior; or the Occupational Safety and Health Administration of the U.S. Department of Labor. The requirements in effect are:

(1) The State of California: Title 8 of the California Administrative Code: Construction Safety Orders, Article 10, "Haulage and Earth Moving." 1591 (1) and 1596 (Register 70, No. 40—October 3, 1970); General Industry Safety Orders, Article 25, "Industrial Trucks, Tractors, Haulage Vehicles, and Earth Moving Equipment," 3650–55 (Register 72, No. 6—February 5, 1972); and Logging and Sawmill Safety Orders, Article 7, "Tractor Yarding," 5243 (Register 69, No. 10—March 8, 1969), all issued by the Division of Industrial Safety, State of California.

(2) U.S. Army Corps of Engineers: Manuals—Corps of Engineers, U.S. Army Safety-General Requirements, EM–385–1–1 (March 1967), or Change 1, March 27, 1972.

(3) Bureau of Reclamation, U.S. Department of the Interior: Section 9, "Machinery and Mechanized Equipment," Safety and Health Regulations for Construction, Part II—Bureau of Reclamation (September 1971).

(4) Mining Enforcement and Safety Administration, U.S. Department of the Interior: Section 77.403a, Part 77, Title 30, Code of Federal Regulations—Mandatory Safety Standards, Surface Coal Mines and Surface Work Areas of Underground Coal Mines, promulgated in the FEDERAL REGISTER (39 FR 24006–24009).

(5) Occupational Safety and Health Administration, U.S Department of Labor: Sections 1926.1001 and 1926.1002, Title 29, Code of Federal Regulations—Safety and Health Regulations for Construction, promulgated in the FEDERAL REGISTER (37 FR 27585–27590), and republished in the FEDERAL REGISTER (39 FR 22880–22886).

(f) Any alteration, repair, or welding of the ROPS and ROPS-to-vehicle frame mounts shall be performed only with prior approval and with instructions from the ROPS manufacturer or under the instructions of a registered professional engineer; and the manufacturer, or engineer, as the case may be, shall decide what qualifications the welders involved in this operation must have.

(g) Each ROPS shall have the following information permanently affixed to the structure:

(1) Manufacturer's or fabricator's name and address; and

(2) ROPS model number, if any; and

(3) Make and model numbers of the equipment on which the ROPS is designed to fit.

(4) For equipment already in existence when this standard goes into effect, a satisfactory substitute for the above-required information will be a certificate from either the manufacturer of the ROPS or a registered professional engineer to the effect that the ROPS does meet the performance standards and is appropriate for the piece of equipment upon which it is installed.

(h) Publications to which references are made in this standard are hereby incorporated by reference and made a part hereof.

The incorporated publications are available at each Metal and Nonmetal Mine Health and Safety Subdistrict Office, MESA. State of California safety orders are available from the State of California Office of Procurement, Documents Section, Post Office Box 20191, Sacramento, California 95820. The U.S. Army Corps of Engineers, Safety-General Safety Requirements are available from the U.S. Government Printing Office, Washington, D.C. 20402. Bureau of Reclamation Safety and Health Regulations for Construction are available from the Bureau of Reclamation, Division of Safety, Engineering and Research Center, Denver, Colorado 80225. SAE documents are available from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, Pennsylvania 15096.

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2. Section 57.14 *Use of Equipment* is amended as follows: advisory standard 57.14–12 which is applicable to surface and underground is revoked and standard number 57.14–12 is reserved.

§ 57.14 Use of equipment.

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57.14–12 [Reserved]

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NOTE.—Incorporation by reference provisions approved by the Director of the Federal Register, February 2, 1977.

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